**1. Why are functions advantageous to have in your programs?**

**Answer :-**

1. Functions are advantageous to have in your programs because they allow you to easily reuse code, reduce code duplication, and make debugging easier.
2. Functions are powerful tools in Python as they allow you to create code that can be called multiple times and pass arguments to it.
3. This makes it easier to debug and maintain your code, and it can also help you create more efficient programs.

**2. When does the code in a function run: when it's specified or when it's called?**

**Answer :-**

* The code in a function will only run when it is called.

**3. What statement creates a function?**

**Answer :-**

* The following statement creates a function :

def my\_function():

# code goes here

**4. What is the difference between a function and a function call?**

**Answer :-**

* **Function :-**

A function is a block of reusable code that is used to perform a specific task. It is defined by the keyword ‘def’ followed by the name of the function and the parameters it takes.

* **Function call :-**

A function call is an expression that uses the function name and the parentheses () to execute the code within the function. It is used to invoke the code contained within the function.

**5. How many global scopes are there in a Python program? How many local scopes?**

**Answer :-**

* There is only one global scope in a Python program.
* Local scopes are created whenever a function is called, and there can be multiple local scopes within one program.

**6. What happens to variables in a local scope when the function call returns?**

**Answer :-**

* When the function call returns, the local variables are destroyed and can no longer be accessed. This is because local variables are only accessible within the scope of the function they are defined in, and once the function ends, the variables are destroyed.

**7. What is the concept of a return value? Is it possible to have a return value in an expression?**

**Answer :-**

* The concept of a return value is that it is the result of a function or expression. It is the output generated when the function or expression is executed.
* Yes, it is possible to have a return value in an expression.

**8. If a function does not have a return statement, what is the return value of a call to that function?**

**Answer :-**

* The return value of a call to a function without a return statement is None.

**9. How do you make a function variable refer to the global variable?**

**Answer :-**

* To make a function variable refer to the global variable in python, you need to use the keyword “global” to declare the variable before you use it in the function.
* **For example :-**

global x

x = 5

def my\_func():

global x

print(x)

my\_func() # prints 5

**10. What is the data type of None?**

**Answer :-**

* None is a data type of its own, denoted as NoneType.

**11. What does the sentence import areallyourpetsnamederic do?**

**Answer :-**

* The sentence import statement is used to import modules, variables, classes and functions from one module to another.
* It is used to make the code shorter and more manageable.

**12. If you had a bacon() feature in a spam module, what would you call it after importing spam?**

**Answer :-**

* We can call the bacon() feature from the spam module using the following syntax :

import spam

spam.bacon()

**13. What can you do to save a programme from crashing if it encounters an error?**

**Answer :-**

**1.** Use a try/catch statement to catch the errors and handle them gracefully.

**2.** Print out a helpful error message that explains what went wrong and how to fix it.

**3.** Use a debugger to check the code, identify the cause of the crash and fix it.

**4.** Make sure you have the latest version of the code, as well as all its dependencies.

**5.** Use logging to track errors and exceptions in the code.

**6.** Use unit tests to test the code and identify potential bugs.

**7.** Monitor the program and its performance to identify any potential problems.

**8.** Add proper error handling to your code to make sure it doesn’t crash.

**14. What is the purpose of the try clause? What is the purpose of the except clause?**

**Answer :-**

* The try clause is used for exception handling, allowing the program to continue to run even if an error occurs. It will attempt to run the code in the try block, and if an error occurs, it will jump to the except clause.
* The except clause is used to handle the error that occurred in the try clause. It will execute the code within the except block and then continue running the program. This allows the program to continue to run, even if an error occurs.